

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: June 1, 2020

SUBJ: Request for a Removal Action at the Conway Park Site,
Somerville, Middlesex County, Massachusetts - **Action Memorandum**

FROM: Gary Lipson, On-Scene Coordinator
Emergency Response and Removal Section II

THRU: Daniel Burgo, Acting Chief
Emergency Response and Removal Section II

William Lovely, Acting Chief
Emergency Planning & Response Branch

TO: Bryan Olson, Director
Superfund Emergency Management Division

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval for an initial removal and a \$2 million exemption to conduct a time-critical removal action at the Conway Park Site (the Site), which is located at 550 Somerville Avenue in Somerville, Middlesex County, Massachusetts. Hazardous substances present in surface and subsurface soil at the Site, if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment.

There are no nationally significant, or precedent-setting issues associated with this Site, and there has been no use of the \$200,000 warrant authority of the On-Scene Coordinator (OSC).

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAN000103054
SITE ID# : 01PR
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

On March 21, 2019 members of the U.S. Environmental Protection Agency's (EPA's) Emergency Planning and Response Branch (EPRB) met with representatives of the Massachusetts Department of Environmental Protection (MassDEP), the City of Somerville, MA (the City), and Weston and Sampson (W&S), an environmental consulting firm hired by the City. The cleanup of the Conway Park Site, a public park consisting of ballfields and a playground contaminated with polychlorinated biphenyls (PCBs) and lead, was discussed. W&S has analyzed numerous samples collected at surface and depth and the data was displayed and discussed. A portion of the playground has been determined to have contamination at levels of concern and is closed as a precautionary measure.

On April 9, 2019, the MassDEP sent a letter to EPRB requesting assistance in remediating contaminated soil at Conway Park, in coordination with the City, who is currently addressing the Site under the Massachusetts' cleanup program.

2. Physical location

The Site is located at 550 Somerville Ave, Somerville, MA and is depicted on City Tax Map 45, Lot 14, dated 7/1/16. The latitude and Longitude are 42.3828 and -71.1078 respectively.

3. Site characteristics

The 2.8-acre Site is owned by the City and used as a recreational complex which consists of a large ball field and a children's playground. The playground occupies roughly 1/3 acre in the northern portion of the Site and the remainder of the Site south of the playground consists of a large grassy field containing two baseball diamonds. A fence separates the two distinct areas. The Site is in a densely populated residential and commercial neighborhood. The park is bounded to the west by the Massachusetts Department of Conservation and Recreation (DCR) Veterans Memorial Ice-Skating Rink; to the north by Somerville Ave., beyond which are commercial, single and multi-family residences; to the east by commercial and multi-family residential properties; and to the south by the Massachusetts Bay Transportation Authority (MBTA) Fitchburg Line rail corridor, beyond which is a residential neighborhood. Due to the contaminated soil, the ballfields and a portion of the playground are closed and off-limits (fencing and signs) until the property is remediated.

This Site is in a high population base. Greater than 16,000 people live within a half mile, a walkable distance for residents, including children, to regularly access this recreation area.

SITE 1		
Location: 550 Somerville Ave.	City: Somerville, MA 02143	County: Middlesex
Population Estimates:		
• Day Pop (1/4 Mile): 3,135	• Day Pop (1/2 Mile): 10,316	• Day Pop (1 Mile): 72,034
• Night Pop (1/4 Mile): 3,571	• Night Pop (1/2 Mile): 16,252	• Night Pop (1 Mile): 67,198

Based on information in EPA's EJSCREEN environmental justice screening tool, 1 out of 11 Environmental Justice Indexes (Wastewater Discharge Indicator) for the area within a one-mile radius of the Site exceed the 80th percentile on a national basis:

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	65	67	48
EJ Index for Ozone	66	68	47
EJ Index for NATA* Diesel PM	39	32	24
EJ Index for NATA* Air Toxics Cancer Risk	57	56	38
EJ Index for NATA* Respiratory Hazard Index	51	48	33
EJ Index for Traffic Proximity and Volume	27	28	19
EJ Index for Lead Paint Indicator	45	40	12
EJ Index for Superfund Proximity	60	63	37
EJ Index for RMP Proximity	12	10	8
EJ Index for Hazardous Waste Proximity	4	2	1
EJ Index for Wastewater Discharge Indicator	85	85	81

The City became the Site owner by virtue of a tax taking deed dated March 30, 1937.¹ At that time, the "Tax Lien Parcel" included lots 14, 15, and 16B as seen on City of Somerville Assessor's Tax Map Number 45, dated July 1, 2016.² These lots had been used for industrial purposes for more than 100 years prior to the tax taking. From 1801 through the 1930s, the Tax Lien Parcel was used first as a bleachery and dye works factory, then as a bleachery, dye, and print works factory. On March 31, 1965, lot 16B ("Realty Trust Parcel": 3,056 ft²) was conveyed by the City to an outside party. On October 11, 1968, the City conveyed a second portion of the original Tax Lien Parcel, Lot 15, this time to the Commonwealth of Massachusetts, Metropolitan District Commission (MDC). Lot 15, comprised of approximately 76,650ft², was used for the construction, development, and maintenance of an indoor ice-skating rink. From the 1930s until the mid-1990s, Bay State Smelting operated as a secondary smelter

¹ Somerville filed a tax taking deed dated March 30, 1937; filed a petition to foreclose on December 30, 1940; and on January 19, 1943, the Massachusetts Land Court issued a Notice of Disposal foreclosing all rights of redemption on the property.

² The Site is currently defined to only include Lot 14.

of scrap metal on lots immediately to the west and adjacent to the original tax lien parcel (including on Lots 16 and 17). Bay State Smelting was associated with numerous environmental and health issues at the Somerville facility during the 1980s and '90s, including OSHA violations, criminal prosecution, reports of direct venting into the air with no dust collection, and high lead levels, including incidences of lead poisoning amongst its workers.

The City has owned the Site (Lot 14) for over 80 years and maintained it as a public park. Aerial photographs from 1970 and 1978 indicate the presence of ballfields on the Site, with baseball diamonds first appearing in 1978. Park renovations were performed in the 1970s (baseball diamonds constructed, landscaping, drainage), again in the 1990s (additional baseball diamonds construction, and playground construction), and in 2001-2003 (utility building demolition and replacement, and playground renovations). Aerial photos through 2016 indicate the location of the baseball diamonds was changed between the 1970s and 1990s.

Since the time of the 1937 City acquisition of the property, the Site (Tax Lot 14), the MDC parcel (Tax Lot 15) and the adjacent parcel that housed the smelting operations (including Tax Lots 16 and 16B) have all been redeveloped from their former industrial uses into public recreational facilities.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

In 2017, the City hired W&S to conduct an environmental assessment in preparation for planned redesign work at Conway Park (Tax Lot 14, aka the Site). In October and November 2017, W&S began its initial investigation by advancing a number of soil borings, excavating test pits, and compositing soil from three borings for a full disposal characterization sample. Greater than half of the soil samples (11/21) exceeded the MassDEP reportable concentration (RC) of polycyclic aromatic hydrocarbons (PAHs) for S-1³ soil, (RCS-1), 9 of 20 samples exceeded the S-1 standard for lead of 200 mg/kg⁴, and the disposal characterization sample indicated that the concentration of PCBs also exceeded the MassDEP RCS-1 of 1 mg/kg. When compared to federal standards, lead concentrations exceed EPA Removal Management Levels⁵ (RMLs) of

³ S-1 is the Massachusetts Contingency Plan's most protective soil category and indicates the presence of children along with accessible or potentially accessible soil being accessed at high frequency and/or low frequency with high intensity use.

⁴ 1 mg/kg = 1 part per million = 1 PPM

⁵ The Regional Removal Management Levels (RMLs) presented for this Site are to support the decision for EPA to undertake a removal action under CERCLA. They are risk-based (although not necessarily protective for long term exposures) concentrations derived from standardized equations combining exposure assumptions with toxicity data from the Superfund program's hierarchy. The RMLs contained in the RML table are generic. In other words, they are calculated without site-specific information (e.g., the time-frame over which individuals may have been exposed to site contaminants). RMLs help identify areas, contaminants, and conditions where a removal action may be

400 mg/kg in some samples, PAH concentrations exceed a number of the EPA RMLs, and the PCB concentration of the characterization sample exceeded the TSCA PCB standard⁶ of 1 mg/kg which is equal to the MassDEP RCS-1 standard.

PCBs, lead, and a number of PAHs are listed in the 40 Code of Federal Regulations 302.4 Designation of Hazardous Substances table.

Due to the exceedances of reportable concentrations for a number of hazardous substances, including PCBs, a supplemental investigation was conducted on March 7, 2018. The purpose was to further delineate the extent of lead and PCBs across the Site and to determine if the adjacent playground is also impacted. Fourteen soil borings (12 in the ballfield and 2 in the playground) were advanced with 4 of the 14 borings developed into groundwater sampling wells. Twenty-five percent of the samples (7/28) exceeded the MassDEP standard for lead of 200 mg/kg⁷ with 4/28 samples exceeded the EPA RML of 400 mg/kg, and PCBs were detected above the State and Federal Cleanup Standard (1 mg/kg) in 7 of 8 samples.

Because lead and PCBs had been detected in the 0-3' below ground (BG) range, W&S collected additional samples on March 26 to determine if hazardous substances were at concentrations of concern in the surficial 0-1' BG range. Two of the 8 samples collected from the playground and 9 of 13 samples collected from the ballfield exceeded the cleanup standard for PCBs. Following notification of the sampling results, the City fenced-off the playground and restricted access to the entire Site. Based on the available data, W&S was able to conclude that an imminent hazard under MassDEP standards⁷ did not exist but recommended continuing closure of the Site pending discussions with the applicable regulatory agencies. The continuing closure is justified based on surface soil exceeding the S-1 and TSCA standard for PCBs of 1 mg/kg and that young children are the prime receptors in the playground.

In July 2018, W&S conducted an Environmental Site Assessment to further delineate the extent of PCBs and lead throughout the Site (refer to the tables on the following page). A total of 91

appropriate. Sites where contaminant concentrations fall below RMLs, are not necessarily "clean," and further action or study may be warranted under the Federal Superfund program. In addition, sites with contaminant concentrations above the RMLs may not necessarily warrant a removal action depending upon consideration of such additional factors including but not limited to background concentrations and the use of site-specific exposure scenarios.

⁶ The Toxic Substances Control Act dictates allowable concentrations of PCBs in soil. 40 CFR 761.61(a)(4)(i)(A) states that 1 mg/kg is the standard in unrestricted use, high occupancy areas. High occupancy is defined in 40 CFR 761.3.

⁷ An imminent hazard determination exists if: 1) PCBs are present within the top 12" at a concentration equal to or greater than 10 mg/kg and if there is unimpeded access, or 2) A method 3 risk characterization indicates that the calculated risk based on the average concentration of the contaminant of concern within the top 12" is unacceptable based on known standards.

soil borings were advanced (74 in the ballfield and 17 within the playground) resulting in over 700 soil samples. An additional 7 concrete samples were collected from the playground.

The Cleanup Standards for PCBs were exceeded in 6 of 11 locations within the playground, all in the grassy, eastern portion. W&S performed a risk characterization of the northwestern portion of the playground and concluded that it was safe for the general public to use. After consultation with the MassDEP and EPA, the City re-opened that portion of the playground on October 22, 2018.

Exceedances of the PCB Cleanup Standard were documented in 224 of 635 soil samples collected from the ballfield, including 51 of 74 samples collected from the surficial 0 - .5' BG range.

Lead concentrations exceeded the MassDEP Cleanup Standards in greater than 25% of all soil samples analyzed from the ballfield. The EPA RML for lead was exceeded in just under 10% of those samples analyzed.

Summary of Soil Analytical Results: PCBS in the Ballfield, July 2018

Contaminant	Depth (ft)	MCP Method 1 and TSCA Standard	# of Samples	Range (mg/kg)	# of Exceedances of Standard
PCBs	0 - .5	≥ 1	74	ND - 26	51
	.5 - 1.5	≥ 1	74	ND - 74	38
	1.5 - 7.5	≥ 1	296	ND - 20,000	115
	7.5 - bottom of boring	≥ 1	170	ND - 40,000	11

Summary of Soil Analytical Results: Lead in the Ballfield, July 2018

Contaminant	Depth (ft)	MCP Method 1 Standard (mg/kg)	EPA RML Standard (mg/kg)	# of Samples	Range (mg/kg)	# of Exceedances of MCP Standard	# of exceedances of EPA RML
Lead	0 - .5	≥ 200	>400	72	6.2 - 350	10	0
	.5 - 1.5	≥ 200	>400	73	2.8 - 850	12	2
	1.5 - 3.5	≥ 200	>400	135	3.6 - 2400	58	18
	3.5 - 7.5	≥ 200	>400	4	260 - 2400	4	3

In January 2019, a geophysical survey was conducted on the southern portion of the ballfield where the highest concentrations of PCBs were detected. Several areas of buried metal objects as well multiple small, non-metallic items were detected throughout the surveyed areas.

On May 15 and 16, 2019, test pits were excavated to identify some of the anomalies detected in the January survey. Clear layers of fill stratification were noted which according to W & S, was characteristic of much of the fill across the ball field. Fill and debris were generally observed to be between 3' and 8' to 12' BG. Debris included brick, fire brick, rubber gaskets, scrap metal, cobblestone, and glass. Two crushed metal tanks were observed mingled with the debris, but there did not appear to be any petroleum-based contamination associated with them. A number of potential capacitors were unearthed in two of the test pits, most being approximately 3.5' – 4' BG. All of the material unearthed during the test pit activities was returned to the ground and placed into the same interval from which it was excavated.

5. NPL status

The Site is not currently on the National Priorities List and has not received a Hazardous Ranking System rating.

6. Maps, pictures and other graphic representations

Please refer to attachments 1 and 2.

Attachment 1: Aerial photograph of Conway Park that depicts the densely crowded neighborhood.

Attachment 2: Conway Park Site Plan that indicates the locations (and dates) of samples collected by the City's consultant, W&S, as part of the site investigation.

B. Other Actions to Date

1. Previous actions

Previous actions have been conducted by a consultant for the City as documented in Section A.4 above. An initial environmental assessment conducted prior to a planned Conway Park redesign identified contaminants of concern which led to multiple rounds of additional environmental sampling. Once it was determined that a section of the playground contained surficial PCB contamination, that section of the playground was closed along with the entire ballfield.

On May 15 and 16, 2019, the City's consultant excavated a number of test pits based on previously noted anomalies. Numerous suspected capacitors potentially containing PCB source material were uncovered and subsequently re-buried.

Up to this point, there have been no attempts to remediate any portions of Conway Park by any local, state, or federal entities.

2. Current actions

The ballfield and a portion of the playground remained closed while local, state, and federal entities assess the data and consider cleanup options. See above for additional details regarding the City's sampling efforts at Conway Park.

Somerville officials have met with local citizens to explain the situation, as the majority of the park remains closed to the public in the interim. EPA proposes that this Action Memorandum will help to address the environmental issues at Conway Park. EPA has been discussing and coordinating impending cleanup activities with the City and MassDEP.

C. State and Local Authorities' Roles

1. State and local actions to date

Beginning in 2017, the City hired and has continued working with an environmental consultant to sample the soil in Conway Park and to define the nature and extent of contamination. The City has been consulting with the MassDEP and EPA's TSCA and removal programs. By letter to the City dated April 25, 2018, MassDEP issued Notice of Responsibility per M.G.L. c.21E & 310 CMR 40.0000, the MCP, due to report of release of oil and/or hazardous material at the Site. This was followed by a letter to the City from MassDEP dated January 10, 2019, reminding the City of its one-year deadline to submit required information per the MCP.

On April 9, 2019, MassDEP issued a letter requesting EPA assistance with the remediation of soil at the Site, notably where elevated PCB concentrations are present as a direct contact risk and above 50 mg/kg in subsurface soils.

2. Potential for continued State/local response

In its request for assistance, MassDEP stated that it does not have the resources to address this Site. Therefore, EPA does not anticipate that the state will be able to assist in the remediation of Conway Park. The City hired a consultant to fully define the nature and extent of contamination at the Site, under MassDEP oversight, prior to MassDEP's request for EPA's assistance. The City has expressed interest in working cooperatively with EPA to address Site cleanup. In addition, Somerville has indicated that it intends to implement Park improvements and upgrades following remediation activities.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

An environmental consultant for the City, W&S, has collected and analyzed numerous surface and subsurface soil samples from Conway Park. They have documented that PCB impacts to surficial soil (0-.5' BG) greater than or equal to 1 mg/kg (MassDEP and Federal TSCA standard) are present throughout most of the ballfield and PCB impacts to soil greater than 1 mg/kg are present in the eastern portion of the playground. Sampling data also indicates extremely high concentrations of PCBs at depth and recent test pit activities have shown that damaged capacitors (a potential source of additional and future contamination) remain below the surface. In addition, lead is present in elevated concentrations throughout the Site, and above the MassDEP method 1 Cleanup standards in approximately 25% and above EPA RMLs in approximately 10% of samples analyzed.

The Site is located in a densely populated area of Somerville (See §A.3. for additional information). At this time, the entire ballfield area is closed to the public and only a portion of the playground is open. The fact that it is a public park in an area of the City that does not have an abundance of open recreational space means that it is a heavily used public space. The playground attracts mainly small children, playing close to the ground and in contact with surface soil amongst the grass and concrete. The ballfield attracts all ages, including small children and because there is a baseball diamond in the ballfield, there is unvegetated soil that is easily accessed.

The following information is culled from fact sheets called ToxFAQs which are summaries about hazardous substances and their health effects. ToxFAQs are published by the Agency of Toxic Substances and Disease Registry (ATSDR):

ToxFAQs for Polychlorinated Biphenyls, August 2014:

Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States but are still found in the environment.

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs. Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. PCBs have been classified as probably carcinogenic, and carcinogenic to humans (group 1) by the EPA and International Agency for Research on Cancer (IARC), respectively.

Children should be discouraged from playing in the dirt near hazardous waste sites and in areas where there was a transformer fire. Children should also be discouraged from eating dirt and putting dirty hands, toys or other objects in their mouths, and should wash hands frequently.

ToxFAQs for Lead, Updated May 2019:

Lead is a naturally occurring metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment, including air, water and soil. Lead can exist in many different chemical forms.

The effects of lead are the same whether it enters the body through inhalation or ingestion. Lead can affect almost every organ and system in your body. The nervous system is the main target for lead toxicity in adults and children.

Long-term exposure can result in decreased learning, memory, and attention and weakness in fingers, wrists, or ankles. Lead exposure can cause anemia and damage to kidneys. It can also cause increases in blood pressure, particularly in middle-aged and older individuals. Exposure to high lead levels can severely damage the brain and kidneys and can cause death. In pregnant

women, exposure to high levels of lead may cause a miscarriage. High-level exposure in men can damage reproductive organs.

Children are more vulnerable to lead poisoning than adults because their nervous system is still developing. Children can be exposed to lead in their environment and prior to birth from lead in their mother's body. At lower levels of exposure, lead can decrease mental development, with effects on learning, intelligence and behavior. Physical growth may also be decreased. A child who swallows large amounts of lead may develop anemia, severe stomachache, muscle weakness, and brain damage. Exposure to lead during pregnancy can result in premature births. Some effects of lead may persist into adulthood.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

As documented in this Memo, PCBs and lead exist in surface soils at this Site at elevated concentrations of concern. As the Site is a public park and one of very few outdoor recreational areas in an extremely populated area, it attracts many small children and young adults to the playground and ballfield. While everyone recreating at the Site can be potentially exposed to airborne contamination (dust/dirt particles), smaller children are also at a higher risk for ingestion of contaminated soil via actual eating of soil and from putting dirty hands, toys or other objects in their mouths.

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

On May 15 and 16, 2019, the consultant for the City excavated a number of test pits based on previously noted anomalies. Numerous suspected capacitors potentially containing PCB source material were uncovered and subsequently re-buried. If these suspected capacitors contain liquid PCBs, they represent a potential source for additional contamination.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Analytical data indicates that PCBs and lead are in surface soils at concentrations of concern. Recreational activities can and will physically move soil around and can create dust, causing the migration of contaminated soil particles. There is also a strong possibility that soil particles will adsorb to any clothing or shoes worn by people accessing the park. This clothing will be brought back to the individuals' homes where contaminated soil can be deposited on car floors and seats, floors of the home, laundry baskets, mud rooms, etc.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

Frost heaves which are common in this part of the country, precipitation events, and high wind can all contribute to the migration and spread of contaminated soils. Surface soils in non-vegetated areas (e.g. base paths in baseball diamond) can easily migrate via sheetflow of water during and after a rain event. During dry conditions, contaminated surface soil particles will be carried by winds and redistributed. Contaminated subsurface soils will move towards the surface during freeze and thaw cycles, resulting in continuing 'fresh' contamination at the surface.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

As discussed earlier in this Action Memorandum, the April 9, 2019 request for assistance letter from the MassDEP to EPA states the following: "Due to limited state and municipal resources, MassDEP is requesting EPA's assistance..." It is therefore unlikely that State resources will be available to assist in funding this cleanup. The OSC is not aware of any other federal response mechanisms that are appropriate or available to respond and/or oversee a response to address the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances or pollutants or contaminants from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, welfare, or the environment. In accordance with OSWER Directive 9360.0-34 (August 19, 1993), an endangerment determination is made based on "appropriate Superfund policy or guidance, or on collaboration with a trained risk assessor," which is outlined and discussed in Section III above. Appropriate sources include, but are not limited to, relevant action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists.

More specifically, EPA relied on the following in making an endangerment determination for this Site. In October and November 2017, soils samples were collected to support the eventual repair and redesign of a portion of the park. Elevated levels of PCBs, heavy metals, and PAHs exceeding EPA RMLs, TSCA standards, and MCP reportable concentrations were detected, which led to MassDEP assignment of a Release Tracking Number (See tables in §II.A.4.). The property has been designated a disposal site under the Massachusetts Oil and Hazardous Material Release Prevention Act, M.G.L. c. 21E, § 1 (Chapter 21E). Site soil contains concentrations of PCBs, heavy metals, and PAHs above EPA and MCP Method 1 S-1 standards. In addition to the exceedance of state standards as described above, EPA also reviewed ATSDR ToxFAQs (§ III of this Action Memorandum) for the contaminants of concern.

V. EXEMPTION FROM STATUTORY LIMITS

CERCLA Section 104(c) states that removal actions can exceed the \$2 million statutory limits if conditions meet either the emergency exemption criteria or the consistency exemption criteria. As described below, conditions at the Site meet the criteria for the emergency exemption, as follows:

A. Emergency Exemption

Under CERCLA § 104(c)(1)(A), removal actions may exceed the \$2 million statutory exemption if:

1. There is an immediate risk to public health or welfare or the environment.

The hazardous substances, namely PCBs and lead in site soils, pose an immediate direct contact threat and/or potential exposure and access the Conway Park had to be restricted as soon as hazardous substances were identified on the property. Further, under adverse weather conditions, exposed contaminated soil could potentially migrate off-site via wind, soil erosion and surface water runoff and pose a risk to those who live or walk near the Park.

As stated in §II.3. Site characteristics, the 2.8-acre Site is in a densely populated residential and commercial neighborhood. The Park is bounded to the west by the DCR Veterans Memorial Ice-Skating Rink; to the north by Somerville Ave beyond which are commercial, single-, and multi-family residences; to the east by commercial and multi-family residential properties, and to the south by the MBTA Fitchburg Line rail corridor, beyond which is a residential neighborhood. According to City officials, Somerville is already under-represented in terms of public recreational and/or park and playground space. Due to the contaminated soil, the ballfields and a portion of the playground is closed and off-limits until the property is remediated to prevent exposure to children and other users.

This Site is in a high population area. Greater than 16,000 people live within a half mile, a walkable distance for residents, including children, to regularly access this recreation area.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

PCBs present in site surface soils (0-6" BG) are greater than or equal to 1 mg/kg (EPA TSCA and MassDEP standards) throughout most of the ballfield and have been detected as high as 40,000 mg/kg. In addition, lead has been detected in excess of EPA RMLs in approximately 10% and the Massachusetts Method 1 Cleanup Standard in roughly 25% of samples collected

from the ballfield and are as high as 2,400 mg/kg. Response actions detailed below include the removal of soil contaminated with PCBs and lead. If these measures are not implemented, there will be a continued threat to public health, welfare and the environment posed by conditions at the Site.

3. Assistance will not otherwise be provided on a timely basis.

MassDEP does not have adequate available resources to address the contamination and the City has approached EPA requesting assistance with Site remediation. Due to the concerns described above, on April 9, 2019, the MassDEP formally requested EPA's assistance with remediation of Site soil, or to oversee performance of remediation work by the City, notably where elevated PCB concentrations are present as a direct contact risk and above 50 mg/kg in subsurface soils.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed action description

The proposed actions will protect public health, welfare, and the environment. The goal of this removal action is to eliminate the direct contact threat and remove the source contamination by excavating and disposing of soils contaminated with PCBs and lead, and potentially other hazardous substances.

During the removal action, EPA's OSC will continue to coordinate all site related activities with the City of Somerville, MassDEP, and the general public.

The actions required to mitigate the threats outlined herein are as follows:

- Conduct a Site walk with the Emergency Rapid Response Services (ERRS) contractor;
- Procure the necessary personnel and equipment to carry out the scope of work as defined;
- Establish a command post/site trailer and staging area, and connect necessary utilities;
- Implement run-off and erosion control measures;
- Conduct air monitoring and implement dust control measures as appropriate (e.g. misting) during the removal action;
- Clear vegetation and remove trees as needed (determine the value of the trees prior to removal);

- Remove light poles (for nighttime field illumination) and electric cables as needed;
- Provide non-working hour site security and maintain security fencing as determined necessary by the OSC in consultation with local authorities;

Extensive sampling and analysis have already been conducted by the City's consultant and presented to EPA and the proposed actions listed below were developed from an assessment of that data. Specific removal activities will include the following:

- Excavation, and disposal off-site, of soil with PCB concentrations greater than ($>$) 50 mg/kg as well as potential source material (capacitors). Contaminated soil and suspect capacitors have been detected in the southwest portion of the Site at depth and identified on available maps. Confirmation sampling will be conducted as necessary to ensure that PCBs $>$ 50 mg/kg are not remaining. Additional soil will be excavated on an as needed basis. Additional contaminated areas, if it is determined that they may continue to act as a source material, will be excavated at depth, as determined appropriate. Any excavations greater than 3' BG will be shored up and/or sloped as appropriate to prevent potential collapse of side walls.
- Excavation of all surface soil in the ballfield area from grade to 18" BG that contain 1 mg/kg or greater PCBs. This soil, provided the concentrations of PCBs remain less than 50 mg/kg, will be used as backfill for the deeper excavations (created while removing all soil $>$ 50 mg/kg).
- Disposal of contaminated groundwater resulting from excavation activities. It is anticipated that during the removal action, potentially contaminated groundwater and or precipitation will need to be pumped out of open excavations. Upon consultation with local and state officials, this water will be sampled as appropriate and if necessary, treated on-site prior to discharging to the local sewer system or back into the ground.
- Placement of a permeable geotextile barrier above any soil left in place with PCB concentrations $>$ 1 mg/kg for the purpose of demarcation as well as to prevent contaminated soil from rising up through the soil column to the surface due to frost heaves or any other mechanism.
- Returning the entire field back to present grade, ensuring that proper soil layering is in place at proper compaction specifications to allow for drainage and installation of a grass or sod surface.
- Repairing of any response-related damages, including replacing trees that were removed as part of the cleanup, other vegetation, and light poles.
- Providing proper ingress and egress for vehicle traffic. This may involve the placement of a temporary road from the site of the excavations on the ballfield out to Somerville Avenue. This ingress/egress will include a vehicle decontamination pad or equivalent to ensure that site contaminants are not inadvertently spread from the Site. Any collected decontamination water will be sampled as appropriate and if necessary, treated on-site prior

- to discharging to the local sewer system or back into the ground.
- Providing traffic control for trucks entering and leaving the Site. This may involve the use of local police.
- Cleanup of any waste streams generated during removal activities. This includes but is not limited to contaminated soil and water, trees, vegetation, poles/pole supports, PPE and any accumulated investigation derived waste. The temporary road (and truck decontamination pad) used for on-site truck traffic will be dismantled when it is appropriate to do so. After consultation with local officials, it will be determined if the road and decon pad materials will be disposed of off-site or if those materials will be used for on-site backfill. Waste Streams will be sampled, documented and shipped off-site for proper disposal at state/EPA approved facilities. As lead has been detected in some locations at levels of concern, the soil will be analyzed for leachability, and if necessary, stabilized on-site prior to loading. Wastes will be live loaded if logistically viable or staged in a secure area on-site while awaiting shipment. Waste staging options will be evaluated based on cost and safety considerations, as well as their compliance with applicable state and federal regulations.
- Demobilizing all personnel and equipment from the Site and, upon consultation with local officials, possibly leave existing security fence in-place.

It is possible that the City may wish to improve the field by installing a synthetic grass surface. If that is the case, the OSC will work with the City to coordinate activities so that the City can continue with field improvements post completion of the removal action.

2. Community relations

EPA will maintain communication with the local community during the course of the removal action through press releases, fact sheets, and public meetings, as necessary. An EPA Community Involvement Coordinator (CIC) will develop all public relations activities in consultation with the OSC. As the City has already begun meeting and communicating with the general public, EPA will work closely with the City to coordinate communication activities.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. Based upon available information, the actions taken at the Site would be consistent with and will not impede any future responses.

4. Description of innovative technologies and sustainable approaches

In accordance with the December 23, 2013 Memorandum, updated August 02, 2016, issued by Office of Land and Emergency Management as well as the Region 1 Clean and Greener Policy for Contaminated Sites, greener cleanup practices should be considered for all cleanup

projects. Greener cleanup is the practice of incorporating practices that minimize the environmental impacts of cleanup actions and maximize environmental and human benefit. Alternative technologies and sustainable approaches will be considered and incorporated, as appropriate, throughout the implementation of the removal action.

As removal activities will include excavation of soil containing extremely high concentrations of PCBs along with source material at depth, on-site surface soil (containing less than 50 parts per million) will be used to backfill those excavations. Because this surface soil will be removed regardless to eliminate any direct contact threat, this action will not only allow the agency to avoid paying for transportation and off-site disposal of this soil, it will also avoid having to import additional fill material.

5. Applicable or relevant and appropriate requirements (ARARs)

Clean Water Act, National Pollutant Discharge Elimination System (NPDES), 40 C.F.R. Parts 122 – 125; 122.26: Establishes the specifications for discharging pollutants from any point source into the waters of the U.S. Also, includes storm water standards for construction sites over one acre. Removal activities will be managed to prevent stormwater discharge from the Site

Clean Water Act, 40 CFR Sections 122.26(c)(ii)(C) and 122.44(k): NPDES regulations for storm water control and management.

Clean Air Act, 40 CFR Part 61, 42 U.S.C. Section 112(b)(1): Standards for controlling dust. The regulations establish emissions standards for 189 hazardous air pollutants. Standards set for dust and release sources. If the removal of contaminated soils generate regulated air pollutants, then measures will be implemented to meet these standards.

40 CFR Part 761 Subpart D: TSCA requirements for cleanup and disposal of PCBs.

40 C.F.R. 761.61(a): Requirements for off-site disposal of bulk PCB remediation wastes and porous and non-porous PCB remediation waste – bulk remediation waste will be managed and disposed of off-site in accordance with these standards.

40 C.F.R. 761.65: Requirements for temporary TSCA regulated waste storage, including design requirements. Proper design considerations will be implemented to ensure that all temporary storage of TSCA-regulated waste satisfies the requirements of the regulations.

40 C.F.R. Section 761.79: TSCA Decontamination of Equipment Used. TSCA decontamination standards and procedures for removing PCBs that are regulated for disposal.

State ARARs:

Chemical Specific:

Technical Update, Background Levels of Polycyclic Aromatic Hydrocarbons and Metals in Soil, MassDEP, May 2002

310 CMR 40.0900: Procedures and Standards for the Characterization of the Risk of Harm to Health, Safety, Public Welfare and the Environment

Action Specific:

310 CMR 40.0040: Managment Procedures for Remedial Wastewater

314 CMR 4.00: Surface Water Quality Standard

MGL c. 21 S. 26-53: Massachusetts Clean Water Act

310 CMR 30.100: Hazardous Waste Regulations - Identification and Listing of Hazardous Wastes

310 CMR 30.300: Hazardous Waste Regulations - Requirements for Generators of Hazardous Wastes

310 CMR 30.400: Hazardous Waste Regulations – Requirements for Transporters of Hazardous Wastes

310 CMR 30.500: Hazardous Waste Regulations – Management Standards for All Hazardous Waste Facilities

310 CMR 30.680: Hazardous Waste Regulations – Use and Management of Containers

310 CMR 40.0030: Management Procedures for Remediation Waste

310 CMR 6.00: Ambient Air Quality Standards

310 CMR 7.00: Air Pollution Control Regulations

Division of Air Quality Control (DAQC) Policy 90-001 (February 1990) – Noise Regulation

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C- Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. Waste generated will be tested to determine whether it exceeds hazardous waste thresholds and, if so, the hazardous waste will be managed on-site and until such time as it is shipped to an EPA-approved off-site disposal location.

6. Project schedule

It is anticipated that the removal action will take approximately three to four months to complete from the time of initial mobilization and will be initiated in the Spring or Summer of 2020, depending on weather conditions and timing of coordination with the City.

B. Estimated Costs

COST CATEGORY		CEILING
<i>REGIONAL REMOVAL ALLOWANCE COSTS:</i>		
ERRS Contractor		\$4,255,000.00
Interagency Agreement		\$0,000.00
<i>OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:</i>		
START Contractor		\$200,000.00
Extramural Subtotal		\$4,455,000.00
Extramural Contingency	20%	\$891,000.00
TOTAL, REMOVAL ACTION CEILING		\$5,346,000.00

VII. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delayed or absence of a removal action described herein will cause conditions at the Site to remain unaddressed and the presence of the Site's hazardous substances will continue to pose a threat to human health and the environment.

VIII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

IX. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy.

The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be \$5,346,000 (extramural costs) + \$200,000 (EPA intramural costs) = \$5,546,000 X 1.4104 (regional indirect rate) = **\$7,822,000⁸**.

X. RECOMMENDATION

This decision document represents the selected removal action for the Conway Park Site in Somerville, MA, developed in accordance with CERCLA, as amended, and is not inconsistent with the NCP. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b) criteria for a removal and the CERCLA section 104(c) emergency exemption from the \$2 million limitation, and I recommend your approval of the proposed removal action and a \$2 million exemption.

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release [§300.415(b)(2)(iii)];

⁸ Direct Costs include direct extramural costs \$5,346,000 and direct intramural costs \$200,000. Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared and is expressed as a percentage of the direct costs 41.04% x \$5,546,000, consistent with EPA's full cost accounting methodology effective October 01, 2019. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be \$5,346,000.

APPROVAL: _____

DATE: _____

DISAPPROVAL: _____

DATE: _____

ATTACHMENT A



